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Annual Report

DEER MANAGEMENT SURVEYS AND ANALYSIS

***Including a Detailed Analysis of East River Firearm
Antlerless License Success***

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2002 Deer Management Surveys

Annual Report

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ABSTRACT

There were 15 South Dakota deer seasons in 2002: 1) West River Prairie, 2) Special West River Buck, 3) West River Landowner, 4) East River, 5) East River Special Buck, 6) East River Landowner, 7) Black Hills, 8) General Archery, 9) Antlerless Archery, 10) Sand Lake National Wildlife Refuge, 11) Lacreek National Wildlife Refuge, 12) Waubay National Wildlife Refuge - Firearm, 13) Youth Antlerless Deer, 14) Muzzleloader Antlerless Deer, and 15) Custer State Park Deer (data not included). A summary of each season where data was collected is presented.

East River (43.4% of licenses, 51.8% of harvest), West River (23.3% of licenses, 27.5% of harvest), General Archery (13.0% of licenses, 5.3% of harvest), and Black Hills Deer (6.8 % of licenses, 5.4% of harvest) represented 86.5% of the 94,301 deer licenses sold, 88.7% of the 122,068 tags and 90.0% of the 62,591 deer harvested in South Dakota in 2002. The state harvest projection included 27,440 whitetail bucks, 25,095 whitetail does, 6,563 mule bucks and 3,493 mule does. Respondents reported hunting an overall average of 5.22 days per hunter for a projected statewide total of 492,552 recreation days in 2002.

The general archery deer season lasted 102 days and hunters could purchase East River and West River licenses, or a statewide archery license. Archers could also apply for up to 3 lottery drawn Special Antlerless Archery licenses. Harvest success was 27% for the general season and 35% for the antlerless season. The two seasons combined to total 15.6% of the licenses sold, 12.2% of the tags sold, and 6.8% of the deer harvest.

The Youth Deer Season had 2,767 antlerless deer licenses sold from the 4,060 available. Success for the season was 54%. The special Muzzleloader Deer season had 3,572 of the 4,870 licenses sold. Success for the season was 35%.

Many more 2-tag licenses were available in 2002 compared to 2001, factoring into only a slight increase in overall success, even though deer harvest was up nearly 7%. Harvest estimates increased from 58,558 in 2001 to 62,591 in 2002. The statewide management goal was to reduce the deer herd and the harvest survey results seemed to support this goal.

A sample of deer incisors was obtained from hunters for determining deer age classes represented in the 2002 harvest. A total of 98,641 envelopes were enclosed in hunter license packets and 27,681 (28%) were returned, 24,181 were usable.

A total of 8,062 deer were classified during the fall of 2002 in order to estimate fawn recruitment. Data were compared with previous years to determine fall recruitment into the present year's population for comparison with harvest data.

No work was performed on Deer Population Modeling in 2002.

PREFACE

Data presented in this report were gathered during the 2002-2003 fiscal period under Pittman-Robertson Project W-95-R-36 for Study Number 9507 titled Deer Management Surveys. Jobs included are:

- Job 9507-1 Analysis of Deer Hunter Report Card Returns
- Job 9507-2 Deer Harvest Age Structure
- Job 9507-3 Mortality Rates of Fawn Age Class in South Dakota Deer Populations
- Job 9507-4 Deer Population Modeling

Previous reports of this study include annual study reports starting in 1973-74, and separate job reports prior to 1973-74. Unit by unit harvest projections for each respective season corresponding to this report are available in Huxoll, Corey, South Dakota Department of Game, Fish and Parks Report, Big Game Harvest Projections, 2002, Game Report No. 2003-01.

Data from this report may be referenced with permission from authorized personnel of the South Dakota Department of Game, Fish and Parks. Copies of the report are available from the Department of Game, Fish and Parks, Foss Building, Pierre, South Dakota, 57501.

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2002 DEER MANAGEMENT SURVEYS

INTRODUCTION

When the early settlers came into South Dakota, deer were abundant. However, the discovery of gold soon brought an invasion of miners, settlers, market hunters, railroads, towns and the demise of a flourishing wildlife scene. Market hunting and killing for sport resulted in a deer population of near zero by 1889, when South Dakota became the 40th State. The Department of Game, Fish and Parks came into being on July 1, 1909. With the creation of the Department and stricter laws, deer numbers began to increase. Today, deer are common in every county of the state. No other big game species has adapted as well to living in close proximity to man than whitetail deer.

The annual harvest of deer in South Dakota increased to an all time high of 65,718 in 1994, then decreased through 1999 to 45,914, but has since increased to 62,591 in 2002. Prior to 1947, the only deer season held in South Dakota was in the Black Hills. Since that time, the number of deer permits in the areas east of the Black Hills has increased dramatically in response to population increases.

Annual harvest regulations are the most commonly applied wildlife management tool used. Regulations can protect the future potential of stock and provide for optimal utilization and equitable distribution of benefits to the hunter. Through the proper application of these regulations, deer are found in all parts of the State. Adequate harvests and proper utilization of the resource can only be accomplished when the public is convinced that sufficient data are being collected to insure that these regulations are used on a scientific, predictable basis to assure that harvest will not jeopardize the population's future potential.

The ultimate objectives of deer management are to insure the health and dynamics of the population within the carrying capacity of the range and landowner tolerance levels, and to provide recreation to sportsmen. The hunting season is the most important tool in the manipulation of deer populations towards these ends.

STUDY OBJECTIVE

The objective of this study was to obtain quantitative data regarding deer herd populations and hunter harvests.

JOB 9507-1 ANALYSIS OF DEER HUNTER REPORT CARD RETURNS

Corey Huxoll, Harvest Surveys Coordinator

OBJECTIVES

Job objectives were to determine deer hunter success, distribution of harvest by date, time, species, age, and sex ratios of deer harvested in each hunting unit. In addition, information is collected on most seasons to determine how many days hunters hunted and what the ultimate "satisfaction rating" a hunter placed on their overall experience.

PROCEDURES

Deer season harvests were assessed utilizing a sub-sampling harvest survey method. A random sample of hunters from all units was contacted by mail after the deer-hunting season. Two follow-up mailings were made in order to maximize response and minimize the effect of non-reporters on projected harvest statistics. A minimum acceptable unit response rate was arbitrarily established at 85%. This resulted in sample estimate statistics within +/- 15%. Projections were made solely from reported data utilizing simple relative mathematical expansions. No correction factors were employed.

Criteria for selecting sample sizes for conducting harvest surveys are as follows:

Either Sex One Species

Licenses Available	Sample Size
≤ 40	N
41-700	$57.663(\ln(N)) - 180.13$
> 700	0.25N

Either Sex Two Species

Licenses Available	Sample Size
≤ 75	N
76-650	$80.128(\ln(N)) - 275.96$
> 650	0.35N

Buck or Doe Only

Licenses Available	Sample Size
≤ 40	0.75N
41-300	$21.94(\ln(N)) - 50$
> 300	0.25N

Two tag Two Sex One Species

Licenses Available	Sample Size
≤ 50	N
51-200	$22.651(\ln(N)) - 41.855$
> 200	0.30N

Two tag Two Sex Two Species

Licenses Available	Sample Size
≤ 75	N
76-150	$35.702(\ln(N)) - 83.47$
> 150	0.45N

The 2002 deer season dates were as follows:

General Archery: Sept. 21 through Dec. 31, except for:

Black Hills Unit: Oct. 1 - Dec. 31,

Sand Lake NWR: Nov. 1 - Dec. 31 (closed during refuge firearm season)

portions of **Lacreek NWR:** closed during firearm season

Waubay Lake State Game Refuge and **Waubay NWR:** closed during firearm season

Fort Meade BLM south unit and **signed portion of north unit:** closed during West river firearm season

Antlerless Archery: Sept. 21, 2002 through Jan. 31, 2003, except for:

Sand Lake NWR: Nov. 1 - Jan. 31, 2003 (closed during refuge firearm season)

portions of **Lacreek NWR:** Sept. 21 - Dec. 31 (closed during refuge firearm season)

Waubay Lake State Game Refuge and **Waubay NWR:** Sept. 21 - Jan. 31 (closed during refuge firearm season)

Fort Meade BLM south unit and **signed portion of north unit:** closed during West river firearm season

Unit 727A: open Oct. 1 - Dec. 31

Youth Antlerless Deer: Sept. 14 - 22 & Dec. 7 - 31.

Muzzleloader: Dec. 14 - Jan. 31, 2003.

West River, West River Special Buck, and **West River Landowner Own Land Only:** Nov. 9-24, except:

units 341B, 345E, and 350C: Oct. 5-13

Dewey, Ziebach, and Gregory Counties: Nov. 2-24

East River, East River Special Buck, and **East River Landowner Own Land Only,** North Units: Nov. 16 - Dec. 1, South Units: Nov. 23 - Dec. 1 except antlerless deer licenses, Nov. 23-Dec. 8

Sand Lake NWR: Nov. 9 - 13 (muzzleloader only), Nov 14 - 18, Nov. 19 - 24, Nov. 25 - Dec. 1, and Dec. 2-8

Lacreek NWR: Oct. 23- 29, and Nov. 20 - 26 (both muzzleloader only)

Waubay NWR (incl. Waubay State Game Refuge): Nov. 8 - 12 (muzzleloader only), Nov. 13 - 17 (muzzleloader only), and Nov. 18 - Dec. 1

Black Hills: Nov. 1 - 30 (type 52), Nov. 10 - 19 (types 01, 04, and 06)

Specific season areas can be found depicted in Figures 1 through 7 and a complete summary of South Dakota's 2002 license sales and deer harvest projections can be found in Table 1.

Historical deer season license sales and summarized season-specific, total harvest records can be found in Tables 2-17. Unit-specific harvest projections for all seasons, season summaries, season trend graphs, as well as other season- and unit-specific statistics are available elsewhere (Huxoll, Corey, South Dakota Department of Game, Fish and Parks Report, Big Game Harvest Projections. 2002 Game Report No. 2003-01).

STATEWIDE DEER HARVEST SUMMARY

There were 87,086 resident deer licenses (plus unlimited licenses) available in 2002 and 89,608 were sold. For nonresidents, there were 2,782 licenses (plus unlimited licenses), and 4,693 were sold. Statewide, there were a total of 94,301 licenses sold that represented 115,775 resident and 6,293 nonresident tags for a total of 122,068 tags.

Random samplings were taken for each season. The minimum season response rate (90%) was met for all seasons except for General Archery Deer (87.6%), Antlerless Archery (86.3%), Youth (86.9%), Muzzleloader (87.9%), Black Hills (89.8%), West River (89.0%), West River Landowner (81.3%), East River (88.0%), and East River Landowner Deer (84.2%). In all cases, the vast majority of units within seasons met the 85% unit response rate goals.

The projected statewide deer harvest was 62,599. This projection included 27,446 whitetail bucks, 25,095 whitetail does, 6,565 mule bucks and 3,493 mule does. Nearly 8,000 more tags were available and over 7,000 more were sold in 2002 compared with 2001. A combination of this increase and an estimated harvest success similar to 2001 appears to account for the increase in overall harvest of approximately 4,000 deer. All seasons except Black Hills and East River Special Buck showed harvest increases compared to 2001. Whitetail doe harvest increased by over 3,000 and was primarily attributed to an increase of 2,603 for the East River season. A decrease in harvest of 293 deer for the Black Hills season appears to be attributed to a reduction in the number of tags available (-250) and a 3% decline in harvest success.

Harvest success varied by less than 4% throughout all seasons except West River Landowner and East River Landowner, which increased by 9% and 10%, respectively. Overall statewide harvest success increased from 52% in 2001 to 53% in 2002.

Respondents reported hunting an average of 5.22 days per hunter, which projects to a statewide total of 492,552 recreation days in 2002. The average number of days hunted increased by 0.2 per hunter, resulting in an increase of approximately 35,000 total days of recreation.

Hunters indicated similar satisfaction values (1 =best to 7=worst) in 2002 compared to 2001 and ranged from 1.35 for East River Special Buck to 3.42 for Sand Lake National Wildlife Refuge.

GENERAL ARCHERY DEER

There were 12,256 general archery deer licenses issued in 2002 (11,119 resident, 1,137 nonresident). All were single any-deer tags for the statewide, East River and West River units.

A random sampling of 25% of licensees was taken (2,749 residents, 307 nonresidents) and the overall return rate for the survey was 87.6%. Approximately 21.4% of responding hunters used the internet response system.

The archery season ran from September 21 through December 31, a total of 102 days. Respondents reported hunting 12.38 days per hunter, which projected to a total of 151,729 recreation days for the season. Of those who responded, 4.9% reported they did not hunt at all.

The projected deer harvest for the general archery season was 3,300 deer (2,238 adult whitetail bucks, 563 adult whitetail does, 105 juvenile whitetail bucks, 69 juvenile whitetail does, 261 adult mule bucks, 64 adult mule does, and zero juvenile mule bucks or does). The projected success rate for the season was 27%. Approximately 53% of responding hunters reported harvesting their deer during the month of November (Figure 8). Satisfaction was also measured (1=very satisfied to 7=very dissatisfied); the average response rate for this season was 2.70.

Hunters were also asked to identify if they harvested a deer in the Black Hills, Sand Lake National Wildlife Refuge, or Farm or LaFramboise Islands. Estimates indicated 268 deer were harvested in the Black Hills (197 in 401 A, 42 in 402A, 19 in 403A, 10 in 404A), 28 at Sand Lake National Wildlife Refuge and 28 on Farm or LaFramboise Islands.

ANTLERLESS ARCHERY DEER

There were 2,436 licenses sold (2,413 resident, 23 nonresident) that represented a total of 2,653 tags of the 3,785 that were available for the season in 2002 (Figure 9). Random sub-samples totaling 2,369 licensees were taken (97% sampled overall) and 2,045 responses were received (86.3% response rate).

The season ran from September 21, 2002 through January 31, 2003, a total of 133 days. Those responding reported hunting an average of 12.7 days per hunter, which projected to 30,937 recreation days for the season. There were 4.6% who reported they did not hunt at all.

The projected harvest for the Antlerless Archery season was 924 deer (88 whitetail bucks, 796 whitetail does, 1 mule deer buck, 39 mule deer does) for a success rate of 35%. The overall satisfaction for the Antlerless Archery season was estimated to be 2.51, on a scale with 1 being "very satisfied" and 7 being "very dissatisfied".

Hunters reported harvesting 5 deer at Sand Lake, 1 at Pocasse National Wildlife Refuge, 0 at Little Bend, 0 at Lacreek National Wildlife Refuge, and 5 at Waubay National Wildlife/State Game Refuge.

YOUTH ANTLERLESS DEER

There were 2,767 single tag antlerless licenses issued for the 2002 Youth Deer hunting season (Figure 10; 2,708 resident, 59 nonresident). Licenses remaining after the second resident drawing became available to nonresidents. All license holders were sampled, of which 2,400 responses (86.9%) were received (6 were undeliverable). Approximately 20.2% of responding hunters used the internet to do so.

The Youth season ran from September 14-22 and reopened from December 7-31, a total of 34 days. Respondents reported hunting an average of 3.96 days each, which projected to 10,957 recreation days for the season. Of those responding to the survey, 6.5% said they did not hunt. License holders were asked if they hunted in September, December or both. Of those responding, 36.7% said they hunted in September only, 37.5% in December only, and 25.3% hunted during both.

Harvest projections for the season estimated 198 whitetail bucks, 1,031 whitetail does (1,229 total whitetails), 16 mule deer bucks and 245 mule deer does harvested (261 total mule deer). The total deer harvest for the Youth Deer season was 1,490, and the overall success rate was 54%. Of those responding, 47.0% reported they harvested their deer in September, 53.0% in December. The overall satisfaction rating for those responding (1 = very satisfied to 7 = very dissatisfied) was 2.52.

MUZZLELOADER DEER

There were 3,149 antlerless deer licenses (3,118 resident, 31 nonresident) issued for the 2002 Muzzleloader Deer season (Figure 11). These licenses represented a total of 3,572 tags (3,527 resident, 45 nonresident). The number of licenses sold and percentage of hunters holding multiple licenses increased from 2001 (Figure 12). A survey sample of 3,067 licensees (97%) was taken and the overall response rate was 87.9%. Approximately 22.6% of responding hunters used the internet response system.

The Muzzleloader season was open from December 14, 2002 through January 31, 2003, a total of 50 days. Hunters for this season averaged hunting 5.29 days, for a projected total of 16,658 recreation days for the entire season. Of those reporting, 11.4% said they did not hunt at all.

The harvest projection for the Muzzleloader season was 1,244 deer (194 whitetail bucks, 828 whitetail does, 13 mule deer bucks, and 209 mule deer does). The overall success rate for the season was 35%.

Average satisfaction for the season was 2.67 (1 = very satisfied, 7 = very dissatisfied).

WEST RIVER DEER

There were 21,939 licenses issued for the 2002 West River Firearm Deer season (19,878 residents, 2,061 nonresidents). A total of 34,384 tags were issued (Figure 13; 31,128 residents, 3,256 nonresidents). In addition, there were 804 West River Special Buck single-tag licenses issued (402 residents, 402 nonresidents), 564 Landowner Own Land Only licenses (748 tags), and 48 special October antlerless season licenses (82 tags). The special October licenses were available in Jones, Lyman, and Mellette counties and were valid during Firearm Antelope season (October 5-13).

A random sample of 13,335 hunters was taken from the Regular West River season (12,094 residents, 1,241 nonresidents), 798 from the Special Buck season (all were sampled, 6 were undeliverable), and 563 hunters from the Landowner Own Land Only licensees (1 was undeliverable). Overall 63.1 % of the West River Firearm hunters were surveyed (60.8% Regular West River season, 99.3% of the Special Buck, and 99.8% of the Landowner Own Land Only licensees). The overall response rates for the seasons were 89.0% for the Regular West River Deer, 90.4% for Special Buck, 81.3% for Landowner Own Land Only, and 93.8% for early October Antlerless. Of all responding hunters, 21.7% of regular West River, 10.0% of landowner only, 20.3% of Special Buck, and 17.8% of early October season hunters responded over the internet.

The West River season was open 16 days from November 9-24 in most units, and from November 2-24 in Dewey and Ziebach counties. Respondents reported hunting an average of 3.42 days in the Regular West River season, 3.67 days in the Special Buck, and 3.96 by the Landowner Own Land Only licensees. These averages projected to a total of 80,336 recreation days for all West River deer seasons (75,031 Regular West River, 2,929 Special Buck, 2,233 Landowner Own Land Only, 143 Early October Antlerless). Of those reporting, 4.4% of the Regular West River season, 3.6% of the Special Buck season, 4.4% of the Landowner Own Land Only, and 11.1 % of early October Antlerless licensees said they did not hunt.

The West River projected deer harvest included 17,203 for the regular deer season, 552 for the Special Buck season, 388 for the Landowner Own Land Only licenses, and 39 for the early October Antlerless season. Success rates were 50% for the regular season, 69% for the Special Buck, 52% for the Landowner Own Land Only, and 48% for the early October Antlerless season. Success for the Regular West River season single tags and 1st tags was 60% (13,189 deer harvested), 2nd tags of 2-tag licenses was 32% (4,014 deer harvested). The estimated regular season deer harvest included 6,318 whitetail bucks, 3,837 whitetail does, 4,618 mule bucks and 2,430 mule does, all slightly higher than 2001 (Figure 14).

The October antlerless season produced a harvest of approximately 40 deer, 36 of which were does, resulting in an overall harvest increase in units 41,45, and 50 of approximately 7% (Table 18).

The mean satisfaction score for those responding to the regular West River season was 2.97 (1 being very satisfied and 7 very dissatisfied). Residents (average satisfaction rating = 3.23) were less satisfied than nonresidents (2.53). When separated by license type, nonresidents were more satisfied than residents in all cases except license type 06 (Table 19).

Regular West River season hunters were asked if they harvested a deer on public land, private land, or walk-in areas. Of those responding, 80.1 % harvested deer on private land, 14.1 % on public land, and 5.8% on walk-in area land.

EAST RIVER DEER

There were 40,977 licenses issued for the 2002 East River Firearm Deer season (40,474 residents and 503 nonresidents). These licenses represented 55,235 total tags issued for the season (Figure 15; 54,346 residents and 889 nonresidents). In addition, there were 400 East River Special Buck licenses issued to residents and 1,840 Landowner Own Land Only licenses (2,080 tags). Application pressure was highest for type 01 (any deer) licenses, with 26,600 applications for 14,935 licenses (Table 20). Next highest were types 04 (any whitetail) and 12 (any deer plus any antlerless deer) licenses with 4,220 1st choice app's for 3,150 licenses, and 5,300 1st choice app's for 5,050 licenses, respectively. On the other hand, only 54.1 % of type 17 (antlerless whitetail plus antlerless whitetail) and 33.3% of type 41 (any mule deer plus antlerless mule deer) licenses were sold.

A random sampling of 17,642 hunters was taken for the regular season (43.1 % of all hunters), all 400 Special Buck hunters, and 1,837 Landowner Own Land Only hunters (99.8% of the hunters - 3 surveys were undeliverable). The response rate was 88.0% for the regular season, 95.0% for Special Buck, and 84.2% for Landowner Own Land Only.

The East River season ran November 16 to December 1 (16 days) in the north and west units. In the southeastern units the season ran November 23 to December 1 (9 days) for type 01, 02, 04, 07, 10, 12, 16, and 41 licenses, and from November 23 to December 8 (16 days) for type 03, 06, 13, and 17 antlerless-only licenses. Respondents reported hunting 3.93 days per hunter for the regular season, 5.09 days for Special Buck, and 4.09 days for Landowner Own Land Only, giving a projected total of 170,601 recreation days for the entire East River season (161,040 regular season, 2,035 Special Buck, 7,526 Landowner Own Land Only). Of those responding, 2.5% of the regular season, 1.8% Special Buck, and 2.1 % Landowner Own Land Only hunters reported that they did not hunt at all.

The projected harvest for the regular East River Deer season was 32,445 (14,300 whitetail bucks, 17,252 whitetail does, 454 mule deer bucks, and 439 mule deer does), 210 for the Special Buck season (197 whitetail bucks and 13 mule deer bucks), and 1,259 from the Landowner Own Land Only hunters (868 whitetail bucks, 237 whitetail does, 76 mule deer bucks, and 2 mule deer does). Success rates were 59% for the regular season, 52.5% for Special Buck, and 60.5% for Landowner Own Land Only hunters. Success for the regular East River season single tags and 1s² tags was 64% (26,374 deer harvested), 2nd tags of 2-tag licenses was 43% (6,071 deer harvested). Whitetail doe harvest was estimated to be 2,130 more than in 2001 and 5,288 higher than in 2000, which translates into a 44% increase in two years (Figure 16).

Of hunters who had type 01 (any-deer single tag) licenses, 39.4% were unsuccessful at harvesting a deer, 50.8% harvested a buck, and 9.7% harvested a doe. Approximately 83.9% of the type 01 harvest were bucks.

Success of hunters at filling their second tags of either double-antlerless (types 13 and 17) or any sex plus antlerless (types 12, 16, and 41) licenses was nearly identical at 44.0% and 44.2% respectively.

This was the first year that hunters who had antlerless-only licenses in Region 3 could hunt a week longer than the regular 9-day season. During the 7-day extension, approximately 861 antlerless deer were harvested, amounting to 16.6% of the total harvest attributed to antlerless-only licenses (Figure 17). Total antlerless-only harvest in Region 3 increased by 24% over the previous year, and was primarily the result in a 26% increase in whitetail doe harvest (Table 21; 994 more total deer, 955 more whitetail does). The

number of tags (connected to antlerless-only licenses) available in Region 3 increased by 19% and the number sold increased by 23% over 2001. Even with this increase in license sales, antlerless-only harvest success still rose slightly from 58.9% to 59.3%.

Units in Regions 2 and 4 also showed an increase in antlerless-only harvest of approximately 11%, and as in Region 3, that was attributed to a 14% increase in whitetail doe harvest (Table 22; 811 more whitetail does). Approximately 26% of the total antlerless-only license harvest occurred during the final 7 days of the season (Figure 18). Unlike Region 3, there were fewer tags (connected with antlerless-only licenses) available and the number of tags sold was almost the same as in 2001. Increased antlerless-only harvest success from 50.0% in 2001 to 55.3% in 2002 was responsible for the increase in overall harvest.

Resident v. Nonresident

Distributions of tag types sold and harvest were compared for both resident and nonresident East River deer hunters (Figure 19). The ratio of "any" deer tags to buck harvest and antlerless deer tags to doe harvest appeared to be consistent regardless of residency status. The results appear to support the observation that "any" deer tags ultimately translated into harvest of bucks, while issuing antlerless deer tags translated into harvest of does. Nonresident hunters were more successful at filling their single/first and second tags than residents were. Nonresidents had 80% and 63% success compared to residents with 64% and 42% for single/first and second tags respectively (Table 23).

The mean satisfaction score for those responding to the regular East River survey was 2.99 (1 = "very satisfied" and 7 = "very dissatisfied"). Mean satisfaction for Landowner Own Land Only hunters was 2.99.

Regular season hunters were asked if they harvested their deer on public land, private land or on public walk-in areas. Of those responding, 84.7% (85.8% residents, 82.1% nonresidents) reported hunting on private land, 10.0% on public land and 5.3% on walk-in areas. A higher percentage of residents (8.7%) reported harvesting their deer on walk-in areas than residents (4.9%).

Similar to West River hunters, East River resident hunters (average satisfaction rating = 3.11) were less satisfied than nonresidents (2.58), where 1 = very satisfied and 7 = very dissatisfied. When separated by license type, nonresidents were more satisfied than residents in all cases except license types 07, 16 and 41, which had very small sample sizes (Table 24). Hunters who filled both tags were more satisfied than hunters who filled only one or neither tag of their 2-tag license. (Table 25).

NATIONAL WILDLIFE REFUGE DEER

The number of licenses issued for the 2002 Sand Lake Refuge Deer season was 594 (540 residents and 54 nonresidents); Lacreek Refuge was 44 (40 residents and 4 nonresidents); and Waubay Refuge was 71 (67 residents and 4 nonresidents). All were single-tag licenses.

All license-holders for each season were surveyed and response rates for Sand Lake, Lacreek, and Waubay refuges were 92.9%, 100.0%, and 94.4%, respectively. Approximately 16.5% of responding hunters used the internet response system.

The seasons had different opening dates in the each refuge. All ran between 5 and 7 days except Unit 603C that was open 14 days. The average days hunted for Sand Lake was 2.61, Lacreek was 2.30, and Waubay was 2.04. Of the refuge license holders who responded to the survey, 6.2%, 11.4%, and 10.4% did not hunt at Sand Lake, Lacreek, and Waubay refuges, respectively. There were 1,550 recreation days projected at Sand Lake, 101 at Lacreek, and 144 at Waubay, for a total of 1,795 days at the three refuges combined.

The reported harvest at the refuges consisted only of white-tailed deer. The projected harvest for Sand Lake was 174 bucks and 67 does, Lacreek 9 bucks and 4 does, and Waubay 14 bucks and 9 does. The projected success rate for Sand Lake was 41 %, for Lacreek 30%, and for Waubay 32%.

BLACK HILLS DEER

There were 6,454 single tag licenses issued for the 2002 Black Hills Deer season (5,980 resident, 474 nonresident).

A random sampling of 2,588 hunters was taken (40.1 % of license holders) and there were 2,324 responses for an 89.8% return rate. Approximately 17.7% of responding hunters used the internet to submit their response.

The traditional Black Hills Buck season ran the usual month of November, a total of 30 days. The special any-deer, any-whitetail, and antlerless-whitetail seasons ran from November 10-19, a total of 10 days. Those responding reported hunting an average of 4.59 days (4.96 days each for those participating in the buck only portion of the season). That projected to 29,624 recreation days for this season. Of those responding, 5.9% stated they did not hunt at all during the season.

The mean satisfaction score for all combined units was 2.75, the highest since license restructuring (Figure 20). The satisfaction scale ranged from 1 = "most satisfied" to 7 = "least satisfied".

The harvest projection for the Black Hills Deer season was 3,369 deer (2,365 whitetail bucks, 346 whitetail does, 618 mule deer bucks, 40 mule deer does). The overall projected harvest success rate for the season was 52%.

JOB 9507-2 DEER HARVEST AGE STRUCTURE

Ted A. Benzon: Statewide Big Game Biologist

OBJECTIVES

The objective of this job is to provide management personnel with harvest age structure data for specific deer hunting units.

PROCEDURES

In 2002, only successful applicants for the Black Hills, East River prairie, West River prairie, and youth deer seasons were required to submit incisors from harvested animals.

Not all hunter-submitted envelopes were usable. In some cases, canceling machines at the Post Offices ripped incisors from the envelopes while other envelopes were empty as hunters had neglected to enclose the incisors. Other envelopes contained incisors with absent root tips while others contained useful incisors but insufficient data were recorded (no unit of kill, no sex of deer killed, or no information at all).

Species classification was determined from incisor structure. Incisor structure and wear were then examined to determine if the deer was a fawn, yearling, or adult. Special care had to be taken in this classification step as some fawns had replaced deciduous incisors completely with permanent incisors. These permanent incisors were hollow, however, and identification was not difficult. Hunting unit, species, sex and age class was then entered into a data base used for season recommendations.

The Black Hills deer season was the only season that had the sectioning process completed. Dental cementum annule ageing technique and process was used as described in the procedure manual by the Wyoming Game and Fish histology laboratory.

FINDINGS

A total of 98,641 envelopes were issued to licensed hunters for the 2002 hunting seasons. Of this total, 27,681 (28% of total issued) were received from hunter submission. Of the 27,681 envelopes received, 24,181 were useable representing 53% of estimated kill from hunters with tooth envelopes. Calculated age structures and interpretation of those data were presented to Operations personnel and recommendations made for the 2003 hunting seasons.

RECOMMENDATIONS

Continue sampling hunter killed deer through incisor submission.

***JOB 9507-3: MORTALITY RATES OF FAWN AGE CLASS
IN SOUTH DAKOTA DEER POPULATIONS
Ted A. Benzon: Statewide Big Game Biologist***

OBJECTIVES

The objectives of this job are to annually determine fall fawn recruitment rates of the Black Hills, West and East River deer populations.

PROCEDURES

Wildlife Conservation Officers and other personnel will conduct random surveys of each deer management unit within the state. Surveys will be conducted preferably in September but may be also been done in October. A minimum of 30 individual observations per species per unit is needed to ensure sufficient sample size. Data collected will include date, time, species, doe and fawn numbers, county, and management unit. Sufficient sample size and avoidance of duplication of counts will be necessary to insure accurate counts.

Survey results will be compiled to obtain fawn/doe ratios for each management unit. Data will be used to determine recruitment rate into population each fall and compared to harvest data as determined in Job II of this study. Statistical analysis of mean fawn/doe ratios and standard errors will also be compared to past years surveys to determine trend. In addition, data from this Job in conjunction with data from Job II will be used in Job IV of this study to model specific management units within the state.

Sampling units - Black Hills management units sampled are reflected in the hunting units in Figure 7.

West River Prairie was divided into Region I and Region 2 for separate reporting classifications and then combined for an overall picture of trend data.

The East River management area was divided into Region 2, Region 3, and Region 4 for reporting classifications and then combined for overall trend data.

FINDINGS

A total of 8,062 deer were classified during the fall of 2002 (Tables 26, 27, 28). Data collected was used to compare trend data from previous years and to determine fall recruitment into the present year's population for comparison with harvest data.

RECOMMENDATIONS

Continue collecting fall doe/fawn ratios for use in season recommendations.

JOB 9507-4: DEER POPULATION MODELING
Ted A. Benzon: Statewide Big Game Biologist

OBJECTIVES

To formulate management unit population models for South Dakota deer populations.

PROCEDURES

Population modeling computer software can be used to simulate deer herd response to a variety of harvest schemes and population dynamics. Input data will in part be based on Jobs I, II and III of this study. Hunter Harvest Survey (Job I) will be used to determine species and sex of hunter killed deer. As hunter harvest makes up the majority of annual deer mortality, these data will be vital to modeling outcomes. Job II (Deer Age Structure Survey) will be used for determining age structure of the harvest. Job III (Recruitment Rates of Deer Fawn Age Class) will yield data on annual recruitment into the population. Relationships of data between and within all three jobs will be used to formulate trend information and estimation of population survival.

Modeling will be used to simulate population numbers and trends. Results of modeling will be used in conjunction with harvest data to formulate hunting season recommendations. As new data on population dynamics becomes available through research, data will be used to adjust input variables to refine model output.

Discussion

No work has been conducted.

STUDY SUMMARY AND CONCLUSIONS

Field Evaluations of Deer Seasons - Subjective Narratives

TED A. BENZON: STATEWIDE BIG GAME BIOLOGIST

East River management area

The winter of 2002-2003 was again mild, which would allow for an increase in population numbers. However, harvest data for the 2002 hunting season did indicate an increase in yearling doe harvest from 23% in 2001 to 33% in 2002, which should hopefully suggest that the deer population was kept in check. An increase in antlerless tags would still be warranted in order to bring the population down to desired numbers. The extended season by one week for antlerless tags did increase doe harvest as was hoped. As in the past, there were leftover antlerless tags for the 2002 season. As expected, the any deer license type resulted in an 82% buck harvest with this tag type which does little to control or reduce population numbers. However, with a decrease in any deer tags in future years, we may be able to hopefully encourage hunters to acquire an antlerless tag for the opportunity to hunt.

West River management area

During 2002, deer numbers continued to increase. Past winters have been mild in most of the management unit. As in 2001, not all the antlerless tags were sold in 2002. Average percent harvest of yearling does was low at 16% that could indicate that again recruitment into the population was not harvested and the deer numbers will increase in 2003. Harvest again on the any deer tag type was 88% buck harvest. Of the does harvested, 82% were taken on the any deer plus antlerless deer tag type. This tag type would appear to be the choice to use in order to control and bring population number down for West River. As with the east river management unit, fewer any deer tags with an increase in the any deer plus antlerless deer tags will be needed to control the increasing deer numbers.

Black Hills management area

The Black Hills deer herd again demonstrated an increase in population numbers. Whitetail fawns per doe ratios increased from 77 fawns per 100 does in 2001 to 96 fawns per 100 does in 2002 which should allow for the desired further increase in population numbers in the central and southern hills. The northern portion of the hills had some slight depredation indicating the need for population control for that area. Although it is desired to increase population numbers in the central and southern hills, it should be a controlled increase keeping the buck to doe ratio in mind. Again, over 40% of the any deer tag type was buck harvest. In order to keep the growth in population numbers in a controlled manner, this tag type should be changed to antlerless whitetail with an increase in tag numbers.

JOHN WREDE: RPM - GAME, REGION 1

PRAIRIE DEER

Population status

Trends in the Western South Dakota deer population are stable to slightly increasing in most management units for both mule deer and white-tailed deer on the Western South Dakota prairies; in spite of increasingly severe drought conditions that persisted well into the winter of 2002/2003. Hunting license numbers were increased in several management units for the 2002 season in an effort to further slow the growth of populations of both species in those units and attempt to obtain a larger number of specimen samples for CWD testing from selected management units. An anticipated higher mortality rate in white-

tailed deer, from EHD did not materialize in the face of hot and dry conditions throughout the summer and fall of 2002, although some isolated small die-offs were reported and investigated. There is a growing concern about the maintenance and/or improvement of deer populations on public lands in western South Dakota. Increasing hunting pressure on public lands is occurring in response to the rapidly evolving fee hunting and private land guiding operations that proliferate on thousands of acres of private land. There appears to be general acceptance of the suggestion that harvest mortality is contributing to lower deer numbers on most public lands. That suggestion, coupled with habitat quantity/quality issues on public lands further compounds the deer distribution disparity. CWD is also a concern in several management units although there appears to be no clear indication that the documented presence of the disease has had any significant impact on population numbers. A mild winter in both 2001/2002 and 2002/2003 has likely contributed to increases in fawn recruitment thereby offsetting whatever population reductions may have occurred. Fall classification counts suggested slightly better than average recruitment at 1.04 fawns/100 white-tailed does and 0.99 fawns/100 mule deer does.

Harvest

Generalized field evaluations of the 2002 deer harvest indicate that hunter success was good to excellent in most management units. A small decrease in hunter success is attributable to increased numbers of licenses and tags. While harvest success did decrease slightly (50% in 2002 as compared to 53% in 2001), more deer were taken by hunters than during the 2001 hunting season. The consistency of harvest percentage seems to indicate adequate access and deer numbers in spite of increases in hunter numbers and tags. The hunt remains largely a pursuit of antlered deer. Nearly twice as many bucks than does were taken during the season even though license types and season design were more heavily slanted toward antlerless harvest. Hunter satisfaction remains high at over 65% approval. Recent surveys conducted indicate hunters would be willing to harvest more antlerless deer if it can be shown that increased antlerless harvest was vital to the proper management of the deer herds and/or it was needed to control disease. Hunters indicate that they are hesitant to take more deer because they already have enough venison for their needs; given that the vast majority of West River Deer Hunters have multiple deer licenses for seasons other than the western South Dakota prairie. There is little question that commercialization of hunting opportunity affects antlerless harvest and overall harvest opportunity for the average hunter. Harvest in three or four management units may also have been impeded by hunter concerns about Chronic Wasting Disease.

As in 2001, mild, warm weather dominated most of the hunting season and some hunters attributed those conditions to their lack of success. Deer were fairly well distributed, mostly on private land throughout the fall and remained that way throughout the majority of the winter.

Depredation

Depredation complaints remained relatively consistent between the winter of 2001/2002 and 2002/2003. The majority of the complaints occurred prior to the opening of the West River Deer Season when a stint of snow and cold weather invaded parts of the Prairie region. Some management units experienced a small increase in complaints while other areas logged no complaints at all. Most of the depredation issues were focused in two management units where hunting access has been problematic in the past; largely due to commercialization or proximity to population centers where hunting activities can present public safety concerns. Mild winter weather certainly moderated depredation issues in most areas. Drought conditions tended to encourage additional deer movements to areas of improved winter resources, which in turn resulted in the highly localized depredation concerns. Only one depredation hunt, and two kill permits were utilized during the winter of 2002/2003 to address depredation issues that could not be satisfied in any other way. Those hunts resulted in approximately 9 animals being taken. White-tailed deer were most responsible for the depredation problems. Some commercial hunting enterprises are reported to be attracting deer onto leased properties prior to the hunting season to better serve a limited number of paying clients and suspending the attractants after the hunting seasons are over. These conditions tend to make it more difficult to manage the deer and the depredation problems that occur on neighboring lands in those areas.

Outlook

Another very mild winter coupled with insufficient antlerless harvest and substantially improved range conditions are expected to stimulate additional herd growth in most management units in 2003.

Evaluation of age class data indicates that most management units are demonstrating strong yearling and adult age classes for both species that will enter the spring fawning seasons. Emphasis in 2003 will once again be concentrated on herd stability in some units and reduction in others. It is likely that total license and tag numbers will exceed the 25 year average for the second year in a row to accomplish the aforementioned. CWD remains a concern and efforts will continue to expand surveillance, both in area and sample sizes, in an effort to secure a better understanding of the disease's distribution and prevalence.

BLACK HILLS DEER

Population status

The Black Hills Deer herd experienced another year of modest growth but remains a mere shadow of historical high population numbers. There appears to have been modest improvement in fawn recruitment in the whitetail species that is likely attributable to small improvements in habitat conditions coupled with two mild winters in a row. Substantial improvements have been made in recruitment of older age class bucks into the herd as well and there is some suggestion that this condition has contributed to a more consistent and stable parturition period in spring. Habitat quality and quantity in addition to inter-specific competition with elk are concerns. Three large forest fires occurred in the Black Hills during the summer of 2002. The fires appeared to have little to no affect on wintering deer and will definitely provide much-improved habitat in the years ahead. It is still commonly held that there is room for expansion of the Black Hills deer herd in spite of the habitat variables, urban encroachment and continued heavy grazing in the Black Hills National Forest. Growth should focus primarily in the central and southern Black Hills. As near as can be determined, species composition remains at 70% white-tailed deer and 30% mule deer in the Black Hills. Deer appear to be near evenly dispersed throughout the Black Hills in summer and tend to concentrate into traditional wintering areas in the east-central and eastern/western foothills of the Black Hills beginning in September through April and May. It has been noted that more deer are beginning to winter in some of the higher elevations of the central Black Hills but it is unknown if these occurrences are functions of mild winters, habitat availability/density responses or home range behavioral characteristics. All things considered, populations have responded positively to management and herd numbers are anticipated to rise again in 2003 barring catastrophic climatic events.

Harvest

Black Hills Deer hunter success remained above 50% overall in 2002 but fell below the historic high of 55% recorded in 2001. Any Deer and Any White-tailed Deer licenses were reduced slightly from the 2001 hunting season but the Buck Only licenses remained the same in number. Hunter success with the Any Deer and Any Whitetail deer license was higher in most units than the buck only license utilized throughout the Black Hills. While the previous two license types are primarily used to take male animals, some doe harvest does occur on those licenses. That appears to be the primary reason for the increased harvest percentage with those license types but that consideration is unconfirmed. Other variables may be equally or more influential, to include reduced license numbers in those categories. The drop in over all hunter success can not be easily explained but it is likely that hunting conditions contributed to the diminished harvest. For the most part, the month of November was unusually mild, with limited snow cover. Deer remained dispersed and the dryer hunting conditions made it more difficult for hunters to locate and approach deer. Some hunters complained about the hunting conditions while others felt it improved the overall climate of their experience. While the climatic conditions may not have been ideal for deer hunting in the Black Hills, they did better accommodate access to all areas of the Black Hills and seemed to reduce the amount of road hunting that has become more popular in recent years. Hunter satisfaction with the season continued to increase; albeit gradually. Hunter comments regarding the observation of a greater number of branch antlered deer during their hunts tends to be born out in the age

class distribution data that shows an average of 58% of all bucks taken with available license types were 2 1/2 years of age or older. Hunters particularly like the uncrowded conditions of the hunt and the opportunity for unencumbered movement that is possible on vast expanses of public land. There appeared to be a slight increase in the number of fawns and yearlings taken with the Any Deer, Any Whitetail Deer and Any Antlerless Whitetail licenses that may be cause for concern and should be closely evaluated after the 2003 season.

Depredation

Depredation concerns were moderated by the mild winter weather of 2002/2003. WCO's and Wildlife Damage Management personnel responded to approximately 100 complaints during the winter months. Many of the problems can not be reasonably satisfied. Many occur in urban and suburban areas and involve ornamental shrubs, trees, feed for horses, etc and occasional fence issues, and many are "nuisance" issues rather than actual damage to property. The Crow Peak Bench area of the Northern Black Hills remains the principle area for depredation concerns. Any Antlerless Whitetail deer licenses were issued for the area in 2002 in an attempt to mitigate some of the problems that routinely occur in mid-late winter and in spring as alfalfa begins to green up. Landowner tolerance for customary deer numbers seems to be decreasing as evidenced by complaints of wintering deer grazing on native or tame hay meadows. These occurrences are difficult to classify as depredation.

Outlook

Given the mild winters of 2001/2002 and 2002/2003, the outlook for the Black Hills Deer population appears very good. Four large wild land forest fires occurred in the Black Hills during the summer and early fall of 2002 that will provide much needed habitat improvements, mostly on winter range. Deer came through the winter in good shape so it is likely that fawn production and recruitment will improve slightly. Predation of fawns by coyotes remains a concern and the increase in mountain lions could present some additional limiting factors requiring more cursory review. Buck Only license numbers are projected to remain the same for the 2003 hunt at 5000 permits. Any Whitetail Deer and Any Deer permits will be reduced and or replaced in small measure with Antlerless Whitetail deer licenses throughout the hills to begin addressing the apparent moderate growth in the population. Deer population estimates in the Black Hills remain between 39,000 to 42,000 animals. Given the nominal improvements in habitat created by both forest management and the fires of 2001 and 2002, it is expected that the Black Hills deer population can be further expanded in selected areas. Given the growing conflicts with suburbanites and small tract property owners, mostly on the fringes of the Black Hills, it is likely that herds using those areas will need to stabilize at present levels. Concerns regarding fawn production and recruitment, Chronic Wasting Disease that was found in the Black Hills during the 2002 hunting season, urban encroachment further into the Black Hills, demand for Black Hills Deer hunting licenses, Forest Service management practices and landowner tolerance issues are problems that continue to confront managers and biologists alike. Work has been done, and continues, in concert with the US Forest Service on Phase II of the Forest Plan Amendment to provide improvements in land management for deer on the National Forest. Expanded CWD investigations are planned for the 2003 hunt to further determine the extent and distribution of the disease in the forest and western South Dakota prairie. The Rocky Mountain Elk Foundation and other NGO's are working on land purchases and conservation easements in attempts to stem the tide of suburban sprawl and preserve deer and elk habitat throughout the Black Hills. Unfortunately, expanded deer hunting opportunity in the Black Hills does not appear to be a possibility in the near future. The present management plan appears to be working well to serve the needs of the deer herd, the habitat and most of the agricultural producers in the Black Hills. Even though some population growth has occurred, a commensurate increase in hunting licenses does not appear possible or in the best interests of the resource.

ANDY LINDBLOOM: RPM - GAME, REGION 2

Population Status

Deer populations along the Missouri River and surrounding counties in Region 2 should be in excellent shape. Harvest in the 2002 deer season was comparable with 2001, and the winter of 2002/2003 was mild. Spring conditions in 2003 have been favorable, with timely precipitation and good vegetative growth in most parts of the region. Field staff are seeing good reproduction so far and many observations of twins have been reported. A few deer were collected and submitted to SDSU diagnostics laboratory for disease testing, but results indicated no concerns on a population scale. Several deer mortalities have been observed and presumed to be EHD, but cases were few and numbers low. Several deer were also submitted for CWD tests but all test results were negative. County Wildlife Assessments continue to show increasing deer populations throughout most of the region.

Harvest

Hunters in Region 2 had good success in the fall of 2002, averaging approximately 61% success, which is nearly the same as 2001. Weather conditions of the opener for the West River season were mostly favorable for deer harvest. Opening day of the East River season, however, was extremely foggy in many areas and may have decreased harvest for that weekend. Total harvest for the region in 2002 was about 12,819 deer and was comparable to the 2001 harvest of 12,717 deer, but substantially greater than 2000 (10,243 deer), 1999 (9,431) and 1998 (9,445). The number of licenses made available has also increased substantially in the last 5 years, going from 11,601 licenses in 1998 to 15,662 in 2002. In 1998 all but 50 of the deer licenses made available were sold out, however, in 2002 we had nearly 5,000 leftover licenses. Thus, it appears many hunting units in region 2 are over-saturated with available licenses.

Youth deer hunter success was approximately 54% in 2002. The number of youth hunter applicants and harvest has remained fairly stable over the last 3 years. Youth hunters can take advantage of many hunting opportunities unique to the youth in Region 2.

Archery hunters continue to grow in number across the state. Only about 21 % of the deer harvested by hunters with general archery licenses in 2002 were antlerless (compare with 36% West River rifle deer, 55% East River rifle deer). Interest in the Antlerless Archery season, however, continues to slowly increase and approximately 1,000 antlerless deer were harvested last year with these licenses. The highest Region 2 deer harvest by archers in 2002 occurred in Charles Mix and Gregory counties.

Interest in muzzleloader hunting also continues to rise. In 2002, more than 1,200 deer were harvested during the Muzzleloader season, with the highest harvest in Region 2 occurring in Lyman and Gregory counties.

Overall the 2002 deer hunting season resulted in record numbers of deer harvested. Unfortunately, harvest was still inadequate to achieve management goals in many units. Deer populations continue to rise, seemingly uncontrolled in some counties, and department personnel are overwhelmingly concerned about producer tolerances and damages to private lands. Annual increases in commercial deer hunting ventures, shooting preserves, and additional private lands closed to deer hunting continue to stand in the way of attaining sufficient deer harvest. In addition, hunter distribution problems, unsold licenses, and poor harvest of the antlerless population complicate deer management in region 2.

Depredation

Deer complaints over the past year have been few and far between. Mild weather conditions have allowed deer to spread out across the landscape and few landowners have been experiencing depredation problems. Hand and Hyde counties have had more depredation complaints than other counties in the region, and deer population levels in those areas are of concern. Other counties have

cumulatively received only a handful of deer depredation complaints, primarily regarding stored feed and standing crops. Region 2 has been encouraging landowners in traditional problem areas to be proactive in protecting stored feed, and approximately 47 landowners over the past fall/winter/spring have set up protective cooperative stackyard fencing in preparation for normal winter conditions and deer depredation.

Outlook

Hunters pursuing deer along the Missouri River and adjacent counties in Region 2 should have ample opportunities for a successful hunt in 2003. Deer populations are at all time high levels and continue to grow in most units. The preceding winter was mild and fawning habitats this spring improved significantly from last year. Region 2 is offering more tags this year and changes in season structure will hopefully encourage and provide opportunities for increased antlerless harvest.

RON SCHAUER: RPM - GAME, REGION 3

Population Status

Deer populations continued to show steady growth throughout most of Region 3. Another mild winter and good habitat conditions were the major reasons for the increase. Disease was not a problem in 2002. There were a few isolated reports of sick or dead deer scattered throughout the region but nothing to be overly concerned about. CWD or EHD was not found in any of the deer that were taken to the diagnostic lab for examination. Landowner tolerance was fairly good throughout the year, because of the mild weather. We are however, getting more deer complaints during the growing season. These complaints involve deer damaging sweet corn, seed corn and melons. We also worked a few deer depredation complaints involving deer damage to trees and /or alfalfa. The total number of deer complaints was up a little over last year, but well below the average during a tough winter.

Harvest

Overall deer harvest was up in 2002. East River deer hunting success was also up 2% over last year, with a region-wide success rate of about 63%. This figure did not take into consideration the success on the second tag of a double tag license, which averaged about 46%. Bon Homme County had the lowest success at 52%, while Jerauld County had the highest success at 70%. The success figures only include the single tag anydeer and antlerless deer tags. Mild weather throughout most of the region made hunting conditions fairly good. The lack of snow may have effected hunter success as well. Region 3 also added a week to the end of the regular season, for antlerless deer only. This was very popular with the hunters and landowners and helped us increase the harvest of antlerless deer. For those that got out and walked, hunting was very good and some nice bucks were taken as well.

Archery deer hunters had another very good year, with an overall success rate of about 27% for the general archery season. The highest number of general archery deer were taken in Minnehaha County (146), while the lowest number were take in Beadle County (18). The special antlerless archery season went well too, with a region-wide success rate of about 38%. This was down about 2% over the previous year. Hutchinson County had the lowest success at 23%, while Union County had the highest success at 54%. Mild weather, good hunting conditions and high deer populations were the major reasons for the high hunter success.

Muzzleloader deer hunters did well in 2002 as well, with an overall success rate of about 36%. Lincoln County had the lowest success at 24%, while Davison County had the highest success at 53%. Good hunting conditions and high deer populations also helped the muzzleloader hunters have a good year. Overall harvest success could be increased, if the season allowed for some buck harvest and an earlier season, in addition to the current late antlerless only season.

Youth deer hunters had an overall success rate of about 48%. This was down about 8% over last year. Brookings County had the lowest success at about 33%, while Sanborn County had the highest success at about 66%. The youth deer season remains very popular and the late season gives kids some added time in the field and another chance to fill their tag.

All things considered, Region 3 had a very good year for deer and deer hunters. Hunting conditions were pretty good. A little snow may have helped as deer were in the heavy cover and hard to find, especially if you spent most of the time looking for deer from a vehicle. The one-week extension for antlerless deer was very well received by both landowners and sportsman. Violations were about the same as last year. Several complaints and citations were issued for shooting from motor vehicles and from roadways. There were also some license lending and tagging problems as well.

Depredation

Deer depredation complaints were up a little over 2001, but down substantially over 2000. Mild weather and a good crop harvest kept complaints at a manageable level. More complaints were received involving deer damage to trees, seed corn, sweet corn and melons. These complaints are tougher to work because they occur in the spring and summer and hunters cannot be used to address the problem until fall. Region 3 did not have any depredation pool hunts but we did utilize kill permits to address a few deer and turkey complaints that could not be handled by any other means.

Outlook

The outlook for the coming year should be excellent. As a result of the mild winter, good reproduction and habitat conditions, overall deer populations should again be up. Tag numbers should also be up and hunters will have plenty of opportunity to harvest deer in 2003.

WILL MORLOCK: RPM - GAME, REGION 4

Population

The 2002 season had excellent weather conditions. The deer herd was in excellent condition going into the season. Reproduction was normal during the year. We had a large herd of deer going into the spring. Most WCO's felt that the population was above where they wanted the herd to be. Hunter success should have been high, but with the number of tags available, many were not purchased or hunters elected not to fill them. There were no reports of any losses due to any diseases, such as EHD.

Harvest

Opening weekend of East River firearms deer was mild and continued throughout the season. Hunters had ample opportunity to fill their tags. Hunter harvest was lower than what we had projected. Hunter success was below 60%. This is lower than what we have had the past several years. The general feeling is that the hunters had filled all the tags they wanted and quit hunting. We also had a large number of tags that were not purchased. We need to develop a new system that will increase willingness of hunters to fill antlerless tags and purchase the tags that are available. It appears that issuing more tags will not increase the harvest.

Archery hunters had normal success. The archery harvest remains at nearly 30% with most of the harvest being bucks. Antlerless only tag harvest is good and has become an aid in controlling the herd numbers. More tags will be available for this group of hunters.

Muzzleloader hunters had good success. This group, along with archery hunters, seems to have little trouble gaining access to private lands. Hunter ethics remain high.

Youth Season hunters enjoyed a good season. The success remains constant at approximately 55-60%. The youth season is a very good season as it is presently structured. The addition of the December season dates has made this a better season. It also allowed for more harvest of deer by this group of hunters and it provides more recreational opportunities.

Violations were down and reports of violations appeared to be down. Weather conditions made it pleasant for hunters to walk fields and hunt from stands. Hunter distribution is still improving. More hunters are waiting until the 'opening day' rush is past before they venture out to hunt. Brown County units were combined into one. Overall hunters accepted the change and are in support of it. Only a couple of minor complaints were received on the change.

Depredation

Depredation was not a problem during this winter. We handled 10 reports of depredation. These were extremely minor and were handled with one visit. We did complete 15 stackyard contracts with landowners that should help future complaints.

Outlook

All units report to many deer for the habitat and winter feed supply. The spring and summer conditions will determine herd growth. License number projections will be raised slightly. The herd is much larger than landowners will tolerate. We need to evaluate and explore new options to increase the harvest of deer. Present hunter numbers appear to be harvesting the maximum that they can use. We either need to recruit new hunters or find ways for our hunters to dispose of deer.

GO TO NEXT SECTION